

Figure 1A

1	ACAAATGACCGGGAGCCATGACGTCATCGGGGGCGCAGGAAAGCAGGTGCTCTGCTGCTT	60
1	MTGSHDVIGGAGKQVLCCF	19
61	. TTGCAAGCAGAGAAATAAGAGTTTGGGCACCTACCCAGGGGTCCCAGGGAATGCCCTGTG	120
20	CKQRNKSL GTYPGVPG MALW	39
.21		. 180
40	LLTSPACNALSTSAVMHGRD	59
.81	TAAGGGGTCTGTGACCCATGGAACTGTCCAAGTCCTCTCTGACACCCGCTTCTTTTCCTG	
*60	K G S V T H G T V Q V L S D T R F F S C	. 79
241	CCGTGAAGGACTACTTCCAGCAACCCAGTCTCCTGCCATGTCCGACCCCATCACGCTGAA	
80	REGLLPATQSPAMS <u>DPITLN</u>	99
301		
100	V G G K L Y T T S L A T L T S F P D S M	119
861		
120	L G A M F S G K M P T K R D S Q G N C F	139
21		
L 4 0	I D R D G K V F R Y I L N F L R T S H L	159
181		
160	<u>D L P E D F Q E M G L L R R E A D F Y Q</u>	179
541		
180	<u>V Q P L I E A L Q E K E V</u> E L S K A E K	199
501		
200	N A M L N I T L N Q R V Q T V H F T V R	219
561		
220	EAPQIYSLSSSME VENAN I	239
721		
240	FSTSCLKLESKLF7CSN	259
781		84.0
260	G N L S S I T S H L Q D P N H L T L D W	279
341		900



Figure 1B

901	CTGGGTGGTGCCCGCCAACAAGCAGATCAACAGCTTCCAGGTCTTCGTGGAAGAGGTACT	960
300	W V V P A N K Q I N S F Q V F V E E V L	319
961 320	GAAAATCGCTCTGAGCGATGGCTTCTGCATCGATTCTTCTCACCCACATGCTCTGGATTT K I A L S D G F C I D S S H P H A L D F	1020 339
1021 340	TATGAACAATAAGATTATTCGATTAATACGGTACAGGTAAAAGGACCCCAACAACACTGG M N N K I I R L I R Y R	1080 351
1081	AGATGGGGAGTCCCAGGAAGCTCATGTCAGCCAGGTCTTGGAGGGCATCTCGCCAGTGGT	1140
1141	GCGAGGCAGGGACTATACTAATCTGTATTAATTGTGTAGCAGGACTTGATTCCCCCCAT	1200
1201	GATGAAGTCCACCTTTTGGAATCCAGTGTCCTCTGAACAGAACCACCTTTTTTCTTGCCA	1260
1261		1320
1321		1380
1381		1440
1441		1500
1501	TTCCTGTCACACCTGCTCCTCCCCCAGGGTGCATCCATGATCGTGGATGTTTGCCCA	1560
1561		1620
1621		1680
1681		1740
1741		1800
1001		

Figure 2A

		rigure 2A
		1 50
K+betaM4	(1)	MTGSHDVIGGAGKQVLCCFCKQRNKSLGTYPGVPGNALWLLT
KCNMB1	(1)	
K+Hnov28	(1)	
K+Hnov27	(1)	
CG10440	(1)	MDRERERDVKALEPRDLSSTGRIYARSDIKISSSPTVSPTISNSSSPTPT
qi.12654691	(1)	
91.12001071	(-/	
		51 100
K+betaM4	(43)	SPACNALSTSAVMHGRDKGSVTHGTVQVLSDTRFFSCRECTLPATQ
		MVKKLVMAQKREERALC
KCNMB1	(1)	OTMAND AND ANALYM TANAMAN TO THE PROPERTY OF T
K+Hnov28	(1)	<u>M</u> DN@DW
K+Hnov27	(1)	MSRPLITTRSPASPLXNQGIPTPAQ
CG10440	(51)	PPASSSVTPLGLPGAVAAAAAAVCGASSAGASSYLHGNHKPITGIPCWAA
gi.12654691	(1)	MPHRKERPSGSSLHTHGSTGTAECGNMSRLSMTRSPVSPLAAQCIPLPAQ
		101 150
K+betaM4	(89)	SĒAMSDPĪTĪMVGGĶLYTĀSLATLTSĀPDSMLGAĶFSGKMPTKRDSQ-GŅ
KCNMB1	(19)	LGVEMVVCAVIEYYILVTEVLPLYOKSVWEGESKCELIETNIRDGEELKG
K+Hnov28	(7)	GYMMWDPVTLNVGGHLYTWSLWTLTRYPDSMLGAMFGGDFPTARDEQ-GN
K+Hnov27	(25)	LEKSMAPVHIDVGGHMYTSSLATLTKYPESRIGRLFDGTEPIVLDSLKQH
CG10440	(101)	ASRYMAPVHIDVGGTTYTSSLETLTKYPESKLAKLFNGQIPIVLDSLKQH
		LETSNAPVHIDVGGIHMYTSSLATLTKYPDSRISRLFNGTEPIVLDSLKQH
gi.12654691	(51)	PERMONAL PART DAG BUMA LE SET EL LA LA DERREMANTE MA LE LA LE DEL ATORITA DE LA COMPANION DE LA COMPANION DE L
	/ >	151 200
K+betaM4	(138)	CFIDRDGKMFRYDLNFLRTSBLDLPEDFOEMGLLRREADGYQMQPDIEAL
KCNMB1	(69)	ĸĸijp@ypcilwvnwsaagrwavlyhwedtrdonoocsyipgsvdnyotara
·K+Hnov28	(56)	YFIDRDGPUFRYKLNFLRTSELTLPLDFKEFDLLRKEADFYQKEPUIQCL
K+Hnov27	(75)	YFIDRDG <mark>Q</mark> MFRYELNFLRTSKLLEPEDFKDKTLLYEEAKYFQLQPMLLEK
CG10440	(151)	YFIDRDG <mark>G</mark> MFREELNFMRMSRLLEAEDFPDLELLLEEARYYEWEPMIKQL
gi.12654691	(101)	YFIDRDG <mark>b</mark> īfry <mark>w̃lS</mark> flrtskīllp <mark>b</mark> dfkdbsll <mark>v</mark> eeakyyoùopmwrel
		201 250
K+betaM4	(188)	QEKEVELSKAEKNAMLNITLNQRVQTVHFTVREAPQIYSLSSSEMEW
KCNMB1	(119)	DVEKVRAKFQEQQVFYCFSAPRCNETS
K+Hnov28	(106)	NDPKPLYPMDSTRKLSKY
K+Hnov27	(125)	ERWKQDRETGRFSRECECDWRWAPDL
CG10440	(201)	ESMRKDRVRNGNYLVAPPTPPARHIKTSPRTSASPECNYEVWALHUSPDL
qi.12654691	(151)	ERWQQEQEQRRRSRACDCLVVVRVTPDL
91.12034091	(131)	Prugo do de
		251 300
V.botoM4	(225)	FNANIESTSCLEWKLLGSKUFYCSNENUSSITSHLODPNHUTLDWANVE
K+betaM4	(235)	
KCNMB1	(146)	VLFQRLYGPQALDFSLFWPTFLDNGGLNIIAMVKSNQYLSDDAAQK
K+Hnov28	(133)	SNPWAWIIT@LTHTKVHSTLEGISNYFTKWNKEMMDTRDCQVSFTFCPC
K+Hnov27	(152)	GERITLSGDKSLIEEKFPEIGDVMCNSVX-AGWNH-DSTHKIRFPLNGYC
CG10440	(251)	GERIMLSAERALLOELFPEASOANOSSRSGNSWNOGDWGOUIRFPLNGYC
gi.12654691	(178)	GERIALSGEKALEEEKFPETGOVMCNSWY-AGWNQ-DPTHKIRFPLNGYC
		301 350
K+betaM4	(285)	GLPBEBYTKQNLKRLWVWPANKQIN-SFQVFVBEWLKIALSDGFCIDSSH
` KCNMB1	(192)	
K+Hnov28	(183)	DYHOEVSLRVHLMEYHTKQGFTIRNTRVHHYSERANENTWEHNWTFCRLA
K+Hnov27	(200)	HLNSVOVLERLOORGEENVGSCGGGVDSSQESEYVLRRELRRTPRVPSVI
CG10440	(301)	KLNSVQVLTRLLNAGETEEASVGGQQFSEYULARRWPM
gi.12654691	(226)	RLNSVQDVL
J=:====	,,	

Figure 2B

		351 368
K+betaM4	(334)	PHALDFMNNKIIRLIRYR
· KCNMB1	(192)	
K+Hnov28		RKTDD
K+Hnov27	(250)	RIKQEPL
CG10440	(339)	
qi.12654691	(235)	

Figure 3

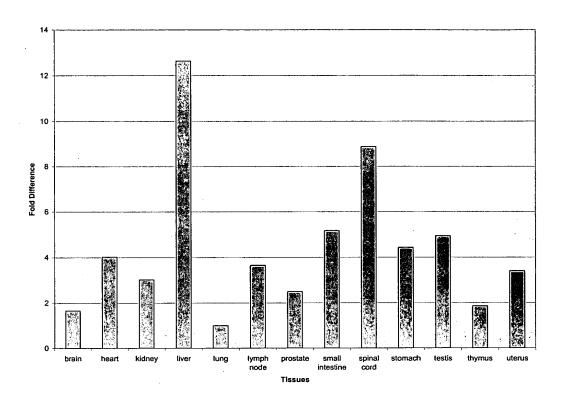


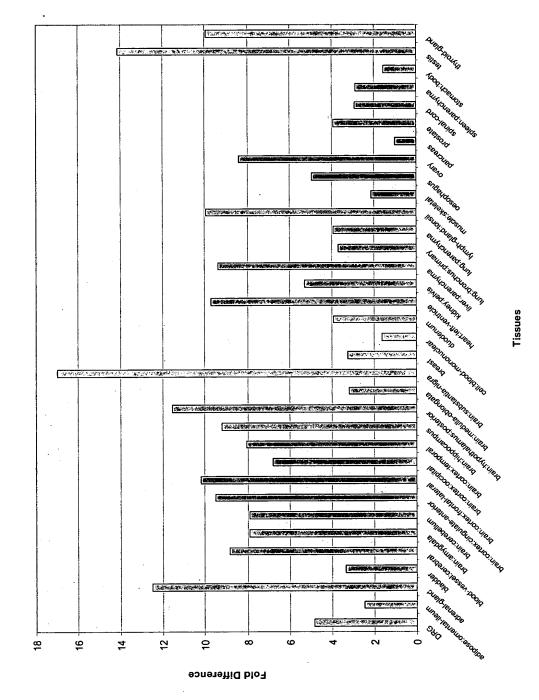
Figure 4.

K+betaM4

Protein	Genbank ID	Identities	Similarities
human potassium channel	gi Y34125	31.6%	45.1%
K+Hnov27 protein			
human potassium channel	gi Y34129	42.3%	50.5%
K+Hnov28 protein			
human neuroblastoma protein	gi 12654691	36.2%	47.3%
Drosophila CG10440 protein	gi 7291303	28.0%	38.6%
Human Maxi-K potassium	gi 4758625	26.1%	39.1%
channel beta subunit, KCNMB1			

K+betaM5

Protein	Genbank ID	Identities	Similarities
human potassium channel	gi Y34129	31.7%	43.4%
K+Hnov28 protein			
the human lung protein, MGC:2376	gi 12654469	34.4%	45.6%
human MSTP028 protein	gi 11640564	31.7%	43.4%
Caenorhabditis K+ channel tetramerisation domain containing protein	gi 3875362	34.4%	45.6%
Drosophila CG10465 protein	gi 7302243	30.8%	38.3%
Human Maxi-K potassium channel beta subunit, KCNMB1	gi 4758625	20.0%	40.0%



igure

Figure 6A

A A G R V M P G A A R R A R G M V V V T GGGCGGGAGCCAGACAGCCGTCGTCAGGACGGTGCCATGTCCAGCTCTGACGCCGAAGAC G R E P D S R R Q D G A M S S S D A E D GACTTTCTGGAGCCGGCCACGCCGACGGCCACGCAGGCGGGGGCACGCGCTGCCCCTGCTG D F L E P A T P T A T Q A G H A L P L L CCACAGGAGTTTCCTGAGGTTGTTCCCCTTAACATCGGAGGGGGTCACTTCACTACACGC P Q E F P E V V P L N I G G A H F T T R CTGTCCACACTGCGGTGCTACGAAGACACCATGTTGGCAGCCATGTTCAGTGGGCGGCAC L S T L R C Y E D T M L A A M F S G R H TACATCCCCACAGGACTCCGAGGGCCGGTACTTCATCGACCGAGATGGCACACACTTTGGA Y I P T D S E G R Y F I D R D G T H F G GATGTGCTGAATTTCCTGCGCTCAGGGGGACCTCCCACCCA	М		GAT	GGC	GGT	${f T}{f T}{f T}$	GCG	GAA	TAG	AAA	AGG	GGG	AAA	GGG	ACC	ACT	CAG	GCG	CCG	GCCG
L A L P A L R L G E L P A N Q G G T S A GCGTCGGCCAGTAGCGGGAGGCGGTCGGGTCAGGCCCCAGCTGGGCGCGAGCGGGTCGGC A S A S S G R R S G Q A P A G R E R V G GTTGAGGGAGCCACCGCCTCCCGCCTGCGCACTGCCTCTCGCCCCCCTCCGGCCAGCCC V E G A T A L P P A H C L S P P S G Q P GCAGCCGGCCGCGTCATGCCAGGCGTCTCCGGCGAGCCAGCC		Т	M	Α	V	L	R	N	R	K	G	G	K	G	P	L	R	R	R	P
L A L P A L R L G E L P A N Q G G T S A GCGTCGGCCAGTAGCGGGAGGCGGTCGGGTCAGGCCCCAGCTGGGCGCGAGCGGGTCGGC A S A S S G R R S G Q A P A G R E R V G GTTGAGGGAGCCACCGCCTCCCGCCTGCGCACTGCCTCTCGCCCCCCTCCGGCCAGCCC V E G A T A L P P A H C L S P P S G Q P GCAGCCGGCCGCGTCATGCCAGGCGTCTCCGGCGAGCCAGCC	СТ	GGC	GCT	GCC	TGC	тст	TCG	АСТ	GGG	CGA	GCT	TCC	TGC	CAA	тса	GGG	CGG	AAC	'CAG	CGCG
A S A S S G R R S G Q A P A G R E R V G GTTGAGGGAGCCACCGCCTCCCGCCTGCGCACTGCCTCTCGCCCCCCTCCGGCCAGCCC V E G A T A L P P A H C L S P P S G Q P GCAGCCGGCCGCTCATGCCAGGCGCTGCTCGGCGAGCCAGAGGGATGGTGGTAGTCACG A A G R V M P G A A R R A R G M V V V T GGGCGGGAGCCAGACAGCCGTCCTCAGGACGGTGCCATGTCCAGGCTGTAGCCCGAAGAC G R E P D S R R Q D G A M S S S D A E D GACTTTCTGGAGCCGGCCACGCCGACGCCACGCAGGCGGGCACGCGCTGCCCCTGCTG D F L E P A T P T A T Q A G H A L P L L CCACAGGAGTTTCCTGAGGTTGTTCCCCTTAACATCGGAGGGGCTCACTTCACTACACGC P Q E F P E V V P L N I G G A H F T T R CTGTCCACACTGCGGTGCTACGAAGACACCATGTTGGCAGCCATGTTCAGTGGGGGGCAC L S T L R C Y E D T M L A A M F S G R H TACATCCCCACAGACTCCGAGGGCCACGCGGTACTTCATCACACGC GATGTGCTGAATTTCCTGCGCTCAGGGGGACCCCCTCCTGGAGAACACCTTTGGA Y I P T D S E G R Y F I D R D G T H F G GATGTGCTGAATTTCCTGCGCTCAGGGGACCCCCCCCCC																				
GTTGAGGGAGCCACCGCCTCCCGCCTGCGCACTGCCTCTCGCCCCCTCCGGCCAGCCC V E G A T A L P P A H C L S P P S G Q P GCAGCCGGCGCGCTCATGCCAGGCGCTGCTCGGCGAGCCAGAGGGATGGTGGTAGTCACG A A G R V M P G A A R R A R G M V V V T GGGCCGGAGCCGAGACAGCCGTCGTCAGGACGGTGCCATGTCCAGCTCTGACGCCGAAGAC G R E P D S R R Q D G A M S S S D A E D GACTTTCTGGAGCCGCCACGCCGACGCCGACGCCACGCAGGGGACGCGCGCCCCTGCTG D F L E P A T P T A T Q A G H A L P L L CCACAGGAGTTTCCTGAGGTTGTTCCCCTTAACATCGGAGGGGGCTCACTTCACTACACGC P Q E F P E V V P L N I G G A H F T T R CTGTCCACACTGCGGTGCTACGAAGACACCATGTTGGAGCCGAGATGGCACACCTTTGGA TACATCCCCACAGACTCCGAGGGCCGGTACTTCATCACGCAGCAGCTGCCCCTTTGACATCCCCCACAGACTCCCCACAGACACCTTTGGA Y I P T D S E G R Y F I D R D G T H F G GATGTTGCTGAATTTCCTGCGCTCAGGGGACCTCCCCACCCA	GC	GTC	GGC	CAG	TAG	CGG	GAG	GCG	GTC	GGG	TCA	.GGC	.ccc	AGC	'TGG	GCG	CGA	.GCG	GGT	CGGC
V E G A T A L P P A H C L S P P S G Q P GCAGCCGGCCGCGTCATGCCAGGCGCTGCTCGGCGAGCCAGAGGGATGGTGATCACG A A G R V M P G A A R R A R G M V V V T GGGCGGGAGCCAGACAGCCGTCGTCAGGACGGTGCCATGTCCAGCTCTGACGCCGAAGAC G R E P D S R R Q D G A M S S S D A E D GACTTTCTGGAGCCGCCACGCCGACGGCCACGCCAGGCGAGGCACGCGCTGCCCCTGCTG D F L E P A T P T A T Q A G H A L P L L CCACAGGAGTTTCCTGAGGTTGTTCCCCTTAACATCGGAGGGGCTCACTTCACTACACGC P Q E F P E V V P L N I G G A H F T T R CTGTCCACACTGCGGTGTACGAAGACACCATGTTGGCAGCCATGTTCAGTGGGCGGCAC L S T L R C Y E D T M L A A M F S G R H TACATCCCCACAGACTCCCAGGGCCGCTGCTCCACCTTCGAGCTGTG Y I P T D S E G R Y F I D R D G T H F G GATGTGCTGAATTTCCTGGGCTCAGGGGACCCCCCCCCAGGGAGCGGTGTTCGAGCTGTG D V L N F L R S G D L P P R E R V R A V TACAAAGAGGCCCAGTACTATGCCATCGGGCCCCCCCCCAGGAGACACTTTCAGAGCTGTG D V L N F L R S G D L P P R E R V R A V CCACTGAAAGAGGCCCAGTACTATGCCATCGGGCCCCCTCCTGGAGCAGCACTGTGAG Y K E A Q Y Y A I G P L L E Q L E N M Q CCACTGAAAGGGCCAGGAAAGGTTGCCAAGGCTTTCTTCAGAGCTGAG CCACTGAAAGGGCCAGAAAGGTTGCCAAAGACTTCTGGAACTTCAGAAAAAAAA	Α	s	A	S	s	G	R	R	s	G	Q	A	P	A	G	R	Ε	R	V	G
GCAGCCGGCCGCTCATGCCAGGCGCTGCTCGGCGAGCCAGAGGGATGGTGGTAGTCACG A A G R V M P G A A R R A R G M V V V T GGGCGGGAGCCAGACAGCCGTCGTCAGGACGGTGCCATGTCCAGCTCTGACGCCGAAGAC G R E P D S R R Q D G A M S S S D A E D GACTTTCTGGAGCCGGCCGACGCCGACGCCACGCCAGGCGAGGCGCGCGCCCTGCTG D F L E P A T P T A T Q A G H A L P L L CCACAGGAGTTTCCTGAGGTTGTTCCCCTTAACATCGGAGGGGCTCACTTCACTACACGC P Q E F P E V V P L N I G G A H F T T R CTGTCCACACTGCGGTGCTACGAAGACACCATGTTGGCAGCCATGTTCAGTGGGGCGCAC L S T L, R C Y E D T M L A A M F S G R H TACATCCCCACAGACTCCGAGGGCCGGTACTTCATCGACCGAGATGGCACACACTTTGGA Y I P T D S E G R Y F I D R D G T H F G GATGTGCTGAATTTCCTGCGCTCAGGGGACCTCCCACCCA	GT	TGA	GGG	AGC	CAC	CGC	CCT	CCC	GCC	TGC	GCA	.CTG	CCT	CTC	:GCC	CCC	CTC	:CGG	CCA	.GCCC
GGGCGGGAGCCAGACAGCCGTCGTCAGGACGGTGCCATGTCCAGCTCTGACGCCGAAGAC G R E P D S R R Q D G A M S S S D A E D GACTTTCTGGAGCCGGCCACGCCGACGCCGACGCCACGCAGGCGGGGGCACGCGCGCGCCCCTGCTG D F L E P A T P T A T Q A G H A L P L L CCACAGGAGTTTCCTGAGGTTGTTCCCCTTAACATCGGAGGGGGCTCACTTCACTACACGC P Q E F P E V V P L N I G G A H F T T R CTGTCCACACTGCGGTGCTACGAAGACACCATGTTGGCAGCCATGTTCAGTGGGCGGCAC L S T L R C Y E D T M L A A M F S G R H TACATCCCCACAGACTCCGAGGGCCGGTACTTCATCGACCGAGATGGCACACACTTTGGA Y I P T D S E G R Y F I D R D G T H F G GATGTGCTGAATTTCCTGCGCTCAGGGGACCTCCCACCCA	V	E	G	Α	Т	Α	L	P	P	Α	Н	С	L	S	P	P	S	G	Q	P
GGGCGGGAGCCAGACAGCCGTCGTCAGGACGGTGCCATGTCCAGCTCTGACGCCGAAGAC G R E P D S R R Q D G A M S S S D A E D GACTTTCTGGAGCCGGCCACGCCGACGCCGACGCCGCGCGGGGCACGCGGGGCACGCGCTGCCCCTGCTG D F L E P A T P T A T Q A G H A L P L L CCACAGGAGTTTCCTGAGGTTGTTCCCCTTAACATCGGAGGGGGCTCACTTCACTACACGC P Q E F P E V V P L N I G G A H F T T R CTGTCCACACTGCGGTGCTACGAAGACACCATGTTGGCAGCCATGTTCAGTGGGCGGCAC L S T L R C Y E D T M L A A M F S G R H TACATCCCCACAGACTCCGAGGGGCCGGTACTTCATCAGCCGAGATGGCACACACTTTGGA Y I P T D S E G R Y F I D R D G T H F G GATGTGCTGAATTTCCTGCGCTCAGGGGGACCTCCCACCCA																				
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Α	A	G	R	V	М	Р	G	Α	Α	R	R	Α	R	G	M	V	V	٧	Т
$\begin{array}{cccccccccccccccccccccccccccccccccccc$					-															
D F L E P A T P T A T Q A G H A L P L L CCACAGGAGTTTCCTGAGGTTGTTCCCCTTAACATCGGAGGGGCTCACTTCACTACACGC P Q E F P E V V P L N I G G A H F T T R CTGTCCACACTGCGGTGCTACGAAGACACCATGTTGGCAGCCATGTTCAGTGGGCGGCAC L S T L R C Y E D T M L A A M F S G R H TACATCCCCACAGACTCCGAGGGCCGGTACTTCATCACACGCAGATGGCACACACTTTGGA Y I P T D S E G R Y F I D R D G T H F G GATGTGCTGAATTTCCTGCGCTCAGGGGACCTCCCACCCA	Ū		_		D	J	•		×	_		••	••					••	_	
CCACAGGAGTTTCCTGAGGTTGTTCCCCTTAACATCGGAGGGGCTCACTTCACTACACGC P Q E F P E V V P L N I G G A H F T T R CTGCCACACTGCGGTGCTACGAAGACACCATGTTGGCAGCCATGTTCAGTGGGCGGCAC L S T L R C Y E D T M L A A M F S G R H TACATCCCCACAGGACTCCGAGGGCCGGTACTTCATCGACCGAGATGGCACACACTTTGGA Y I P T D S E G R Y F I D R D G T H F G CTGCTGAATTTCCTGCGCTCAGGGGACCCCCCCACCCAGGGAGGCGTGTTCAGGAGCTGTG D V L N F L R S G D L P P R E R V R A V CTACAAAGAGGCCCAGTACTATGCCATCGGGCCCCCCCCC																				
P Q E F P E V V P L N I G G A H F T T R CTGTCCACACTGCGGTGCTACGAAGACACCATGTTGGCAGCCATGTTCAGTGGGCGGCAC L S T L R C Y E D T M L A A M F S G R H TACATCCCCACAGACTCCGAGGGCCGGTACTTCATCGACCGAGATGGCACACACTTTGGA Y I P T D S E G R Y F I D R D G T H F G GATGTGCTGAATTTCCTGCGCTCAGGGGACCTCCCACCCA												~								
CTGTCCACACTGCGGTGCTACGAAGACACCATGTTGGCAGCCATGTTCAGTGGGCGGCAC \bot S T L, R C Y E D T M L A A M F S \blacksquare R H TACATCCCCACAGACTCCGAGGGCCGGTACTTCATCGACCGAGATGGCACACACTTTGGA Y I P T D S E \blacksquare R Y F I D R D \blacksquare T H F \blacksquare G GATGTGCTGAATTTCCTGCGCTCAGGGGACCTCCCACCCA																				
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Ρ		E	F	Ъ	Ŀ	V	V	Ъ	L	N	Ι	G	G	Α	Η	F	T	T	R
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	P	×	Е	F	Ъ	<u>E</u>	<u>V</u>		<u> P</u>	<u>L</u>	<u>N</u>	I	G	G	<u>A</u>	H	F.	<u>T</u>	<u>T</u>	<u>R</u>
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	СТ	~ GTC	CAC	ACT	GCG	GTG	CTA	CGA	AGA	CAC	CAT	'GT'I	'GGC	AGC	CAT!	GTI	CAG	TGG	GCG	GCAC
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	СТ	~ GTC	CAC	ACT	GCG	GTG	CTA	CGA	AGA	CAC	CAT	'GT'I	'GGC	AGC	CAT!	GTI	CAG	TGG	GCG	GCAC
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	CT <u>L</u>	GTC S CAT	CAC T	ACT L. CAC	GCG R AGA	GTG C	CTA Y	CGA E GGG	AGA D	CAC T	CAT M	GTT L	'GGC A 'CGA	AGC A	CAT M BAGA	GTT F .TGG	CAG	TGG G LACA	GCG R	GCAC <u>H</u> TGGA
TACAAAGAGGCCCAGTACTATGCCATCGGGCCCCTCCTGGAGCAGCTGGAGAACATGCAG Y K E A Q Y Y A I G P L L E Q L E N M Q CCACTGAAGGGCGAGAAGGTGCGCCAAGCGTTTCTGGGACTCATGCCCTATTACAAAGAC	CT <u>L</u> TA	GTC S CAT	CAC T	ACT L. CAC	GCG R AGA	GTG C	CTA Y	CGA E GGG	AGA D	CAC T	CAT M	GTT L	'GGC A 'CGA	AGC A	CAT M BAGA	GTT F .TGG	CAG	TGG G LACA	GCG R	GCAC <u>H</u> TGGA
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	CT L TA Y	GTC S CAT I	CAC T CCC P	ACT L. CAC T	GCG R AGA D	GTG CTC S	CTA Y CGA E	CGA E GGG G	AGA D CCG R	CAC T GTA Y	CAT M	GTT L CAT	GGC A CGA D	AGC A	CAT M AGA D	GTT F TGG G	CAC S CAC T	G G ACA	GCG R CTT F	GGCAC H TGGA G TGTG
	CT L TA Y	GTC S CAT I	CAC T CCC P	ACT L. CAC T	GCG R AGA D	GTG CTC S	CTA Y CGA E	CGA E GGG G	AGA D CCG R	CAC T GTA Y	CAT M	GTT L CAT	GGC A CGA D	AGC A	CAT M AGA D	GTT F TGG G	CAC S CAC T	G G ACA	GCG R CTT F	GGCAC H TGGA G TGTG
	CT L TA Y GA D	GTC S CAT I TGT V	CCC P GCT L	. ACT L CAC T	GCG R AGA D TTT F	GTG C CTC S CCT L	CTA Y CGA E CGCG R CGCG	CGA E GGG G CTC S	AGA D CCCG R AGG	GGAA Y	. CCAT M . CTT F . CCT L	CCAT I CCCC P	GGC A CGA D CACC P	. AGC A	CAT M SAGA D SGGA E	GTT F TGG G GCG R	CAC T TGT V	G G G G G G G G G G G G G G G G G G G	GGCG R ACTT F GAGC A	. GCAC H . TGGA G TGTG TGTG CTGTG TGTG
PLKGEKVRQAFLGLMPYYKD	CT L TA Y GA D	GTC S CAT I TGT V	CCC P GCT L	. ACT L CAC T	GCG R AGA D TTT F	GTG C CTC S CCT L	CTA Y CGA E CGCG R CGCG	CGA E GGG G CTC S	AGA D CCCG R AGG	GGAA Y	. CCAT M . CTT F . CCT L	CCAT I CCCC P	GGC A CGA D CACC P	. AGC A	CAT M SAGA D SGGA E	GTT F TGG G GCG R	CAC T TGT V	G G G G G G G G G G G G G G G G G G G	GGCG R ACTT F GAGC A	. GCAC H . TGGA G TGTG TGTG CTGTG TGTG
	CT L TA Y CC	GTC S CAT I TGT V CAA K	CAC T CCCC P GCT L AGA E	. ACT L	GCG R AGA D TTT F	GTG CTC S CCT L GTA Y	. CCGA E . CGGCG R . CTA Y	CGA E GGG G CTC S TGC A	AGA D CCCG R CAT I	GGAC Y GGGA CGGG G AGGA	. CCAT CCTT F . CCCT L . CCTT CCCT CC	CCAT CCCC P CCCT L	CGA DCGA DCGA DCCGA PCCCT L	. AGC	CCAT AGGA GGGA CCAT	GTT F TGG G GCG R	CAG T TGT V GGA E	G G A A H A GAA N	GGCG R CTT F SAGC A	GGCAC H TGGA G TGTGTG V TGCAG CGCAG

Figure 6B

841	GCCAAGCTCAAGAGCTTGACACCTTCCTGGCTAATGAGTGTCCTCATCAAGATGCCCCCT	900
281	AKLKSLTPSWLMSVLIKMPP	300
901 301	GGAGTCACATCATGGATTAACGCAGAAAGGCGGCTGTATTTGGAAACTCCCATTGGTCCA G V T S W I N A E R R L Y L E T P I G P	960 320
961 321	GAGAGACAATGAGAAGAAATCCCCTGTCCAGTTGCCTGCAGGAGTATTCCAACAC ERONNEKKSPVQLPAGVFQH	1020 340
321		340
1021 341	$\begin{tabular}{lllllllllllllllllllllllllllllllllll$	1080 343
1081	GCACTGTTCTCTGTTTGCATGGCAATTCTGACCCTTTTATGGCAACAACACCCCTGGGAC	1140
1141	AACCCAGATTTGTAGATTGAGATCCAAAGGTAGAATTTCCAGACAGCCCAACCAA	1200
1201	CAAGTGATGTTTCCAGAGTGGAAGGCTCTCACCGTGTCCCAGGATTTCTGGGGTTTGTAA	1260
1261	GCAGTACTGGCCATTTGTGACCCTGTTTTTTACCTAATCATTCTGTCTTTTTAGGACATG	1320
1321		1380
1381		1440
1441		1500
1501		1560
1561	GGTACCTTTTGAAAGAACCCCTTCAGGGATATCTATCCACAGTAGCCTGGAGCAGCCAAG	1620
1621		1680
1681		1740
1741		1800
1801	CAGCTGAATCCCAGAGCTTCCCAAAGTGGACACCAGCGGGGACTATTCCTGATGTCCCAC	1860
1861	CCAAGAGAGAAGATGAGCTGAGGCGCTCTTGCTCTGCCCAAATGCATCCCATGTGCATT	1920

Figure 6C

1921	CACGTGTCACCCATTCAAAATAACATGGCATTCTTGGAACCTTGTATCTGACATGTAAGA	1980
1981	CCAGCCTACACATTGGGGTGGGTGCAGGGGCTCACACTTGTAATCCTAGCACTTTGGAAG	2040
2041		2100
2101	AATCCTGTCTCTAAGAAATAAATAATAATAATAAAAAAAA	

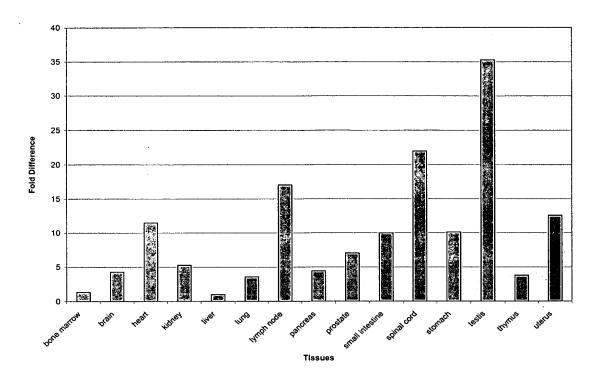
Figure 7A

		rigure /A
** }	(2)	1 50
K+betaM5	(1)	MTMAVLRNRKGGKGPLRRRPLALPALRLGELPANQGGTSAASASGRRSG
KCNMB1	(1)	
CG10465	(1) (1)	
gi.12654469	(1)	
K+Hnov28	(1)	
MSTP028	(1)	
K+channel_tetra	(1)	
		51 100
K+betaM5	(51)	QAPAGRERVGVEGATALPPAHCLSPPSGQPAAGRVMPGAARRARGMVVVT
KCNMB1	(1)	QAFAGKEKVGVEGATADFFANCDSFFSGGFAAGKVMFGAAKKAKGMVVVI
CG10465	(1)	
gi.12654469	(1)	
K+Hnov28	(1)	
MSTP028	(1)	
K+channel_tetra	(1)	1
m, chaimer_cccra	(-/	
		101 150
K+betaM5	(101)	GREPDSRRQDGAMSSSDAEDDFLEPATPTATQAGHALPLLPQEFEEWVPL
KCNMB1	(1)	MVKRDAMA
CG10465	(1)	DHKILLKGHSSQYEK
gi.12654469	(1)	
K+Hnov28	(1)	MST資VEL MDNGDWGYMM现DPVTL
MSTP028	(1)	MEEMSGESVVSSAVPAAATRTTSFKGTSPSSKYVKL
K+channel tetra	(1)	MEPSTEVKI
recommen_cccca	\-/	M.EM.M
		151 200
K+betaM5	(151)	NEGGAHETTRLSTLRCYEDEMLAMFSGRHYEPTDSEGRYFIDRDGTHFG
KCNMB1	(9)	@KRCETRALCLCVTMVVCAVITYYDWVTTVLPLY@KSVWTQESKCHLIET
CG10465	(24)	NVGGHIDXYTTIIGTLTKNNDMLSAMFSGRÄEVLTDSEGWIRLDRCGNHFG
gi.12654469	(8)	NVGCEFHTTTLGTLRKFPGSKLAEMFSSLAKASTDAEGRFFLDRPSTYFR
K+Hnov28	(17)	NVGGHLYTTSLTTLTRYPDSMLGAMFGGDEPHARDBOGNYFIDRDGPLFR
MSTP028	(37)	NVGGALXYTTXQTLTK-QDMLKAMFSGRXEVLTDSEGWILLDRCGKHFG
K+channel tetra	(10)	DVGGKTEKTTTFTLCK-HDSMLKTMFCTDVPVTKVEEGSVFIDRDSKHFR
_		
		201 250
K+betaM5	(201)	DVLNELRSGDIPPRER-VRAVYKEAOYYAIGPLIEQLENMQPLKGEK-
KCNMB1	(59)	NIRDQEELKGKKNPQYPCLWVNVSAAGRWAVWYHTEDTRDQNQQCSYIPG
CG10465	(74)	IILNMLRDGTWPLPETNKERABILAEAKYYCTTELAISCERALYAHQEPK
gi.12654469	(58)	PILDXLRTGQVPTQHIPEVYREAQEYEIKPLVKLLEDMPQIFGEQV
K+Hnov28	(67)	YMINGLRTSELTILPLDFKEDDLLRKEADSYQIEPLI@CLNDPKPLYPMD-
MSTP028	(86)	TILNYLRDGAVPLPESRRETEBYLAEAKYYLVQGLVEECQAALQNKDTYE
K+channel_tetra	(59)	LILNEURDGQMALPDSDREVREVLAEASYFILMDPLMELCGERLEQSLNP-
		251 300
K+betaM5	(247)	VRQAFLGLMPYYKDHLERLWEIARLRWQR
KCNMB1	(109)	SVDNMQEARADVEKVRAKFQEQQVFYCESAPR
CG10465		PICRTPTTSQKEEQLMSVSLKPAVTTVVQRQNNKYSYTSTSDDNMKN
gi.12654469		SRKOTLEQVPGYSENLEEMVRLARAEATTARKSSWEVC
K+Hnov28	(116)	
MSTP028	(136)	
K+channel_tetra	(108)	YMHUVSTVLBARKIIFAMEKPIVVURLPVYIATSGNQSYYFS
** * · · · ·	(0:	301 350
K+betaM5	(277)	KARTAKIKSLTPSWIMSWLIKMPPGVTSWINAERRIYLETPIGP
KCNMB1	(141)	GNETSVIFOZIYGPQAZIYFŞLFWPTŞLZITGGLLIZIAMYKSNQY ZELZIDKUSLZINERZIZIKOVIGPSEICOWSZYGHGZZYAEZYCCTSI
CG10465	(1/4)	WETEEQDAYMSEVECTED DKKMFKSVVKFGPWKAVLDNSDUMHCLEMDI
gi.12654469	(142)	IEGISNYFTWNKHMDIRDCQVSFTFGPCDXHQEVSLRVHIMEYIT
K+Hnov28	(153)	EGMSNYFTKWNKHMNDMRDCQVSFTFGPCDMHQEVSLKVHMMEYIT
MSTP028	(TRP)	ETKERE SEEWHKHWAFILITEPEFNEDCSWSFFLRAKKITARIKG-P
K+channel_tetra	(150)	PIVAKOTO PERMUNINA MARTITOPE MPDC 2 MPD PLOKATAGE 1 HK I MC - A

Figure 7B

K+betaM5 KCNMB1 CG10465 gi.12654469 K+Hnov28 MSTP028 K+channel_tetra	(321) (184) (221) (192) (200) (232) (197)	KAQGYKVF <u>SK</u> FYLTYPTKRNEFHFI KQGFTI <u>RNERV</u> HHMSERANENTVEI WYATEKKOEKVEFPEARIYEETLN	400 VLLYENRNAPDQELMQATSSARVG NIYSFTFTWW HNWTFCRLARKTDD ILLYEAQDGRGPDNALLEATG
		401	440
K+betaM5	(344)		
KCNMB1	(192)		
CG10465	(269)	SASGTSINQYTSDEEEERTGLARL	RSNKRNNPS
gi.12654469	(226)		
K+Hnov28	(238)		
MSTP028	(277)	GAAGRSHHLDEDEERERIERV	RRIHIKRPDDRAHLHQ
K+channel_tetra	(221)		

Figure 8





Figure

σ

